

## METHOD AND APPARATUS FOR ANONYMOUS DATA PROFILING

### BACKGROUND OF THE INVENTION

This invention relates generally to methods for gathering information, and more particularly to methods and apparatus for anonymous data profiling of consumers.

One well accepted marketing tool is to gather information about a target audience and direct a product, or service, to that audience. However, it is difficult to obtain information about the target audience because many individuals do not freely provide information about themselves to strangers. One reason is because the more information people divulge about themselves, the more likely it is that others will use that information to contact the person that divulged the information.

Accordingly, it would be desirable to provide companies with targeted information while not divulging personal contact information of the consumer.

### BRIEF SUMMARY OF THE INVENTION

In an exemplary embodiment, a method for gathering anonymous data about an individual includes administering a password to the individual, receiving information from the individual, and storing the information in a database. Identifiers such as name, address and social security number are not included in the gathered anonymous data.

The anonymous data includes a number of attributes. The attributes are compared with marketer generated data sets to determine if the marketer generated data sets would possibly be a match with the individual's attributes. If a match is determined, then the market generated data sets are permitted to reach the consumer. The consumer is then given the opportunity to provide feedback to the system to enrich the marketer data set. Thus individuals may provide valuable feedback to marketers without divulging identifying information about themselves.

### BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a block diagram of an exemplary embodiment of a server architecture for a consumer generated anonymous data system;

Figure 2 is a block diagram of an alternative exemplary embodiment of a server architecture for a consumer generated anonymous data system;

Figure 3 is a schematic diagram of a method for generating anonymous data profiles of individuals; and

Figure 4 is a schematic diagram of a method for utilizing anonymous data profiles to respond to marketing generated data sets.

## DETAILED DESCRIPTION OF THE INVENTION

Figure 1 is a block diagram of an exemplary embodiment of a server architecture for an electronic data communications network system 10 that gathers and utilizes consumer generated anonymous data. System 10 is connected to a distributed computer network, such as the Internet, including that part of the Internet known as the World Wide Web. The term Web as used herein refers to the World Wide Web, wherein computers known as Web servers display graphical and textual information using files or "pages" composed in Hyper Text Mark-up Language (HTML). The Web servers communicate information over the Web or other network from a Web server at a central site to a remote computer terminal used by a customer. Although the exemplary system described herein is implemented on the Web, it should be understood that other types of distributed computer networks are suitable for being connected to system 10.

In one embodiment of system 10, the location of a page on the Web is specified by a uniform resource locator (URL), which is an alphanumeric string representing the server address on the Web. At the remote computer terminal, a remote user initially accesses a page by typing a specified URL into a Web-browser such as Netscape™ by Netscape Communications Corporation, or Internet Explorer™ by Microsoft Corporation. Multiple pages at a Web site are linked together via hyperlinks which are represented on a computer screen by a graphical icon such as a button or a highlighted line of text. Hyperlinks are configured to implicitly invoke another URL when a computer user clicks on a computer mouse button while a mouse-controlled screen cursor is positioned over a hyperlink icon.

In one embodiment, as shown in Figure 1, system 10 includes a web server 12, an application server 14, a database server 16, a directory server 18, a workflow server 20, and a mail server 22. A disk storage unit 24 is coupled to

5 database server 16 and directory server 18 and provides a data repository for storing data pertaining to consumer generated anonymous data and marketer generated data. Servers 12, 14, 16, 18, 20 and 22 are coupled in a local area network (LAN) 24. LAN 24 also includes a processor (not shown) programmed to communicate with servers 12, 14, 16, 18, 20, and 22.

10 Web server 12 and mail server 22 are configured to be communicatively coupled to computers 26, 28, and 30 of individuals, i.e., consumers, via an ISP Internet connection 32. In addition, a plurality of computers 34, 36, 38, and 40 of marketers are communicatively coupled to web server 12 and mail server 22 via ISP Internet connection 32. Further, at least one work station 42 is coupled to LAN 24 for simultaneous monitoring of various tasks and methods described below. The processor is further programmed to communicate with consumer computers 26, 28, and 30, with marketer computers 34, 36, 38, and 40, and with work station 42.

15 The communication in the exemplary embodiment is illustrated as being performed via the Internet through web browsers loaded onto computers 26, 28, 30, 34, 36, 38, and 40 of consumers and marketers, respectively. Other wide area networks (WAN), however, could be used in other embodiments, i.e., the systems and processes described herein are not limited to being practiced over the Internet. LAN 24 is configured to store data obtained through an interface (not shown) such as a web page maintained on web server 12, to compare data generated by consumers with data generated by marketers, and to enable consumers to access selected sets of information generated by marketers.

20 Figure 2 is a block diagram of an alternative exemplary embodiment of a server architecture for a system 50 that gathers and utilizes consumer generated anonymous data. Components in system 50 identical to components of system 10 are identified in Figure 2 using the same reference characters as in Figure 1. System 50 differs from system 10 in that system 50 includes a fax server 52 coupled to LAN 24. Fax server 52 communicates with consumers via a telephone link 54. Also, in system 50 the mail server is incorporated into web server 22.

30 The architecture of systems 10 and 50 are exemplary only. Other architectures are possible and can be utilized in connection with practicing the methods described below. Moreover, the methods described below could alternatively be initiated by a consumer without a computer or fax machine. For example, customers could phone or mail the required information and an operator

could enter data directly into LAN 24 by workstation 42 or by an operator with a computer remotely communicating with LAN 24 through ISP Internet Connection 32 or other WAN.

Figure 3 is a schematic diagram of a method 100 for generating anonymous data profiles about a consumer. Method 100 includes the step of accessing 102 a consumer generated anonymous data system, such as systems 10 and 50 shown in Figures 1 and 2, respectively. Access to consumer generated anonymous data systems 10 and 50 is through a secure access that entitles only a limited number of individuals to enter systems 10 and 50. As described below in greater detail, the information supplied by the individuals is considered to be confidential proprietary information. To protect the information from unauthorized individuals seeking access, the system includes a security element. One example of such a security element is a firewall.

The firewall is a software-based gateway which impedes or limits access to a LAN, such as LAN 24 shown in Figures 1 and 2. The access is machine-limited so that only authorized remote computers have permission to get through the firewall. To implement the firewall, the system in one embodiment includes servers, such as web server 12 shown in Figures 1 and 2, mail server 22 shown in Figure 1, or fax server 52 shown in Figure 2, through which all communications with computers outside LAN 24 must take place. Servers 12, 22, and 52 are programmed to validate queries from a user on any machine authorized to communicate with LAN 24 via remote terminals, such as terminals 26, 28, 30, 34, 36, 38, 40, and 42. Servers 12, 22, and 52 include special programs enabling them to forward valid requests or queries from authorized machines through the firewall to LAN 24.

Alternatively, the security element identifies authorized users rather than machines. This approach is more complex than the basic firewall approach because queries or requests from a user on any remote terminal are validated using an encrypted unique identifier inputted at the remote terminal. The unique identifier is, e.g., a password such as a validation code consisting of an alphanumeric string. Alternatively, the password can be combined with answers to a series of questions. The unique identifier is encrypted to frustrate password sniffers who are capable of intercepting unencrypted passwords as they pass from machine to machine through the Web. Servers 12, 22, and 52 validate the encrypted unique identifier, and allow access to LAN 24. In another alternative embodiment, the security element identifies

authorized users using a one-time or limited use password supplied by servers 12, 22, and 52 on request from the user.

In one exemplary embodiment, a first time a user accesses the consumer generated anonymous data system, the user is requested to create 104 a multi-character identifier password. After an appropriate password has been created, the user is then requested 106 to answer a series of questions. Alternatively, the user chooses a series of questions and answers those questions accordingly. The questions are personal questions that invoke answers specific to the user. An exemplary question is "favorite color". After the personal questions have been answered, the user is granted access 108 to LAN 24. Once LAN 24 has been accessed, the user is provided access 110 to a consumer generated anonymous data database. The user is then requested to fill out 112 a detailed questionnaire as described below in greater detail. The answers to the questions in the questionnaire are stored 114 in a consumer generated anonymous data database. When the user decides to leave 116 the database and the LAN, the user exits the consumer generated anonymous data system.

If the user decides to return to the consumer generated anonymous data system, the user again accesses 102 the consumer generated anonymous data system and is requested to submit 118 the user's password. If the correct password is submitted, the user is then requested to answer 120 a question specific to the user identified by the password. Each question is asked only one time, or a limited number of times, per visit, or per day, to reduce the possibility of someone other than the user correctly answering the questions. In addition, all communications between the user and the consumer generated anonymous data system are encrypted to provide additional security measures to method 100.

If the user answers the question correctly, the user is granted access to the LAN as described above. If the user answers the question incorrectly, the user is requested to answer a second question. If the user answers the second answer correctly, the user is granted access to the LAN. If, however, the user answers the second question incorrectly, the user is requested to answer a third question. This question and answer session continues until either the user correctly answers a question, or the system exhausts its list of questions. If no correct answers are given, the user is denied access to the system. In an alternative embodiment, if the user incorrectly answers the first question, the user is denied access to the system for a remainder of the day.

When access is granted to the user, all communications between the user and the consumer generated anonymous data system are conducted utilizing the password. The user is directed to supply no contact information to the system. Such information includes, but is not limited to, name, address, social security number, and telephone number. The lack of this contact information in the consumer generated anonymous data database adds a further layer of privacy to the information supplied by the user to the system. This supplied information may then be utilized by the system, while the user's identity is maintained in confidence by the user. The system never has access to the user's identity.

The consumer profile is generated using the questionnaires. A series of questionnaires will be presented to the consumer. Each questionnaire will take the consumer about 10 – 15 minutes to complete. The questions will be formatted, for example, as multiple choice, true/false, or short answer. The first questionnaire will be general in nature, and will include questions directed, for example, to categories such as age, sex, marital status, zip code, number, sex, and ages of children, spouse, job, residence, pets, hobbies, cars, and others. Follow-up questionnaires will include questions directed towards answers given in the initial, or previous, questionnaires.

Figure 4 is a schematic diagram of a method 150 for providing feedback regarding sets of marketing data utilizing anonymous consumer data profiles. The anonymous consumer generated data profiles are generated and stored as explained above with respect to Figure 3. After the profiles are generated, a consumer generated anonymous data system, such as one of systems 10 and 50 shown in Figures 1 and 2, respectively, accepts marketer generated data, i.e., advertising data, in a marketer data base, as described below. An administrator, or intermediary, oversees the consumer generated anonymous data system and is the point of contact for the marketers and for the consumers. Thus, the marketers have no contact with the consumers.

A company that desires to have consumer feedback on one or more products or services accesses 152 the consumer generated anonymous data system via a URL. The company then requests 154 to have a set of data reviewed by a relevant group of consumers. The sets of data may be, for example, an advertisement or other information on which the company would like to obtain feedback. The company agrees 156 to provide compensation in return for feedback from the relevant group of consumers. The compensation is paid to the intermediary, who then distributes a

portion of the compensation to the consumers, as described below in greater detail. The set of data is then stored 158 in a marketer database. The set of data is reviewed 160 by the system to determine 162 the relevant group of consumers. For example, the consumer generated anonymous data system includes a processor programmed to compare the set of data with each consumer generated profile to determine which individual consumers may be interested in viewing the set of data.

After the processor has determined which consumers may be interested in viewing the set of data, a record is made 164 of those consumers. When each consumer accesses the consumer generated anonymous data system, those consumers on the record are notified 166 of a potentially relevant set of data that may be of interest to them. If the consumer views 168 the set of data, the consumer is given the opportunity to provide 170 feedback to the system with respect to that set of data. The feedback provided by the consumer will include information regarding whether the consumer approved or disapproved of the set of data. In addition, the feedback will include information regarding whether the consumer has any interest in viewing similar sets of data in the future, and whether the timing for viewing similar sets of data is appropriate. The system will thus be able to better match consumers with sets of data based on the feedback provided by the consumers. The feedback that is directed towards the approval or disapproval of the set of data will be aggregated by the intermediary and then provided to the company. In addition, the feedback will be broken down in a detailed format.

The consumer then receives 172 compensation for providing feedback with respect to the set of data. In an exemplary embodiment, the compensation is in the form of digital cash, online credits, or a coupon issued to the user. The coupon can be printed by the user and taken to a designated bank, savings and loan, or credit union which will then cash the coupon. The user thus maintains their anonymity and is still able to be compensated for their time to provide feedback regarding the sets of data they reviewed.

Although the company can access the consumer generated anonymous data system, the company is unable to access the consumer generated anonymous data database. Access to the consumer generated anonymous data database is only permitted if a correct password and answers to a series of questions is given. Therefore, the company does not have access to any of the consumer generated

anonymous data other than that provided by the intermediary regarding the aggregated information of the consumers.

5 The LAN and the consumer generated anonymous data system are operated by an intermediary. The intermediary sorts and organizes the data entered by the consumers and also the data entered by the companies. In addition, the intermediary matches the correct set of data to be reviewed with the relevant individual to review the data. The intermediary also forwards the appropriate compensation to the appropriate individual after their review of an ad.

10 The consumer generated anonymous data system and the method for generating anonymous data profiles provides an extra level of security to individual consumers. The consumers can freely divulge information without anyone knowing who provided the information. The system allows the consumer to create a self-generated profiling data set that is rich in content, yet anonymous. Because of the rich content of the data set, the system provides efficient target marketing to companies.  
15 Thus, companies get aggregated feedback from a targeted audience and consumers can provide insight into products and services while keeping their identities from the companies.

While the invention has been described in terms of various specific embodiments, those skilled in the art will recognize that the invention can be practiced with modification within the spirit and scope of the claims.